

What Is Claimed Is:

1. A receiver unit having at least two signal receivers (2a, 2b, 2c) for analog received signals, an analog-digital converter (ADC) for converting the analog received signals into digital received signals, and having a signal processing unit (12) for the digital received signals, characterized by at least one adder (11) at the output of the signal receivers (2a, 2b, 2c) for adding the analog received signals, the adder (11) being connected by its output to the input of a common analog-digital converter (ADC) and the digital signal processing unit (12) being configured to separate the added received signals.
2. The receiver unit as recited in Claim 1, wherein the signal receivers (2) have mixers (7) for mixing the analog receiver units to different intermediate frequencies (ZF).
3. The receiver unit as recited in Claim 1 or 2, wherein at least one signal receiver (2a, 2b) should be configured for mixing an analog received signal to an intermediate frequency (ZF) and at least one other signal receiver (2c) should be configured for receiving and filtering one defined receiving frequency band and adding this receiving frequency band to the intermediate frequency signal.
4. The receiver unit according to one of the preceding claims, wherein the several signal receivers (2) are provided for simultaneously receiving analog received signals on different channels and/or according to different transmission standards.
5. A method for receiving analog received signals, particularly of radio broadcast signals, having a receiver unit as recited in one of the preceding claims characterized by
 - simultaneous reception of several analog received signals,
 - addition of the analog received signals,

- analog-digital conversion of the addition-received signal, and
- separation of the digital addition-received signal into several digital received signals corresponding to the several analog received signals.